VOLVO

2023-06-05

Hon. Michelle L. Phillips

Secretary to the Commission

New York State Public Service Commission

Re: Proceeding on Motion of the Commission to Address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure (Case 23-E-0070)

Dear Secretary Phillips,

Volvo Group North America (Volvo Group) welcomes the opportunity to provide comments to the New York State Public Service Commission's (Commission) proceeding to electrification needs of the state's medium- and heavy-duty electric[1] vehicle (MHD EV) sector (Case 23-E-0070).

First, we applaud the Commission for initiating the proceeding with the focus on MHD EV considerations. Keeping in mind the outsized impact of the goods movement industry and services on air pollution and carbon emissions, investments in MHD EV charging infrastructure will have positive environmental justice implications and improve air quality and public health for decades to come. We firmly believe this proceeding and other venues should provide a foundation for future efforts to align electric network and transportation network planning to meet the Climate Leadership and Community Protection Act (CLCPA) and zero-emission vehicle (ZEV) targets.

Overall Comments

- Charging MHD EVs (e.g., electric Class 8 trucks, electric refuse trucks, electric city transit buses, etc.) is very different from charging light-duty (LD) EVs (e.g., electric cars, electric vans, etc.). MHD vehicles operate with unique operation duty cycles, charging schedules and rates, require high power chargers, and need more space to maneuver. Charging sites for MHD EVs can serve LD EVs, but those designed exclusively for LD EVs will not work for MHD EVs.

- Delays in infrastructure projects will undermine the adoption of MHD EVs. The risk is that EV adoption outpaces our electric infrastructure, which can take years to build. Therefore, a formal structure and process needs to be created wherein

[1] By electric vehicles we mean battery-electric vehicles herewith.

local agencies and utilities are accountable to ensure timely completion of make-ready infrastructure projects. The Commission should implement the following solutions to speed up needed access to energy for MHD EV charging infrastructure to meet the state's climate goals and ZEV targets.
    - Expedite and streamline service connection processes for EV load electrification. For example, improving easement process, maintaining an inventory of utility equipment, improving and offering feasibility studies, streamling design approvals, and having the necessary staff are ways to expedite connecting EV chargers to the grid.
    - Reform the interconnection process for distributed front-of-the-meter projects considering power demands of large MHD EV deployments.
    - Support utility planning efforts to identify high-capacity (or "no-regrets") sites for MHDV electrification.
    - Authorize charging deployment at "no-regrets" sites and grid build out to support anticipated power demands.
    - This proceeding should also create a pathway to propose, review, and receive approval for necessary capital investments to accommodate MHD EV charging in capacity-constrained areas.

- The Commission should expand the MHD EV make-ready pilot to support both utility-side and customer-side make-ready infrastructure deployment, as is the case for the LD program. For instance, National Grid is only authorized $6M for an MHD EV pilot compared to approximately $170M for LD EV pilots. Furthermore, incentives should be provided for temporary charging solutions, distributed energy resources (DERs) including networked chargers, load management software, and co-located battery storage to the extent that these tools mitigate the need for grid upgrades. Finally, the make-ready program requirements – eligibility criteria, any match-funding, data-sharing, etc. – should be designed with enough flexibility to enable the best experience for the program members.

- The Commission must set clear targets and metrics for its programs related to MHD EVs that align with state policies and goals for this sector.

- Public charging sites that support MHD EV fleets (i.e., commercial fleets with electric Class 8 trucks) are essential for accelerating the penetration rate of MHD EVs, especially among smaller fleets and independent owner operators (like drayage companies) that do not own properties where they can install chargers. As of today, there are no public charging sites that support MHD EVs in New York. Moreover, building and operating public charging stations is a complicated

business with no guaranteed rate of return on these capital investments, especially in these early days of the MHD EV market. Such projects have very long lead times, and require extensive planning, large real estate, significantly higher power (3+ MW), large financial commitments, multi-stakeholder engagement, and technology resources to maintain uptime and resiliency. For example, the public charging site in Volvo LIGHTS[2] could not be built within the project timeline of three years despite having the funding, real-estate, and all the necessary partners. For New York to meet its decarbonization targets and timelines, it is imperative that the make-ready programs support public charging sites (that includes dealerships and truck stops) for electric Class 8 trucks. Finally, collaboration with the Commission and all relevant stakeholders is essential to develop and implement competitively neutral policies that will encourage competitive private investment, ownership, and operation of publicly accessible charging stations.

- Finally, the Commission should consider the equity impacts of the existing program and any changes with a goal of maximizing reductions in greenhouse gases (GHGs) and local air pollution impacts, particularly for those disadvantaged communities that disproportionately suffer the harm of this pollution today.

Volvo Group shares the state's carbon reduction goals and aims to work with the state and our customers to reach a net-zero carbon economy on the timelines and milestones established by the state.

We look forward to continuing our productive work with the Commission, Commission staff, the Joint Utilities, other state agencies, and all other stakeholders to support the transition to the cleanest transportation in the Empire State while ensuring all communities benefit, especially those overburdened by air pollution.

Kind regards,

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[2] www.lightsproject.com

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About the Volvo Group

Volvo Group drives prosperity through transport and infrastructure solutions, offering trucks, buses, construction equipment, power solutions for marine and industrial applications, financing and services that increase our customers' uptime and productivity. Founded in 1927, the Volvo Group is committed to shaping the future landscape of sustainable transport and infrastructure solutions. The Volvo Group is headquartered in Gothenburg, Sweden, employs some 100,000 people worldwide, and serves customers in more than 190 markets. Volvo Group North America, with headquarters in Greensboro, NC, employs more than 13,000 people in the United States and operates 11 manufacturing and remanufacturing facilities in seven states. In 2022, the Volvo Group's global net sales amounted to about $47 billion.

In New York, the Volvo Group and its dealers employ more than 1,200 people with locations in Plattsburgh, Bronx, Rochester, Jamaica, and many other locations. Volvo Group is in the process of training and certifying dealers to sell and service its electric products. Currently, dealers at two locations in New York have been certified as electric Class 8 vehicle dealers, with more expected to be added soon.

Volvo Group's Electromobility Solutions

The Volvo Group has spent years developing complete solutions for electromobility, and today – in North America – we are selling five configurations of the Volvo VNR Electric[3] truck, the Mack LR Electric[4] waste hauler, the Mack MD Electric[5], five electric Volvo Construction Equipment models[6], and the Nova Bus LFSe+ electric bus[7]. Both Class 8 truck models are assembled exclusively in the U.S. for the North American market. While electric vehicles are a suitable solution for local goods

[3] https://www.volvotrucks.us/trucks/vnr-electric/
[4] https://www.macktrucks.com/trucks/lr-series/lr-electric/
[5] https://www.macktrucks.com/trucks/md-electric/
[6] https://www.volvoce.com/global/en/our-offer/emobility/
[7] https://novabus.com/blog/bus/lfse-plus/

distribution, city buses, regional haulage and similar applications, hydrogen fuel cells (to power the electric driveline) will be a viable option for heavy transport and challenging long-haul applications. For use cases involving heavier loads and/or longer distances, the weight of the batteries themselves becomes a limiting factor, and hydrogen fuel cells are likely to be an interesting alternative.

With this in mind, the Volvo Group has formed cellcentric, a joint venture with Daimler Truck AG to accelerate the development, production, and commercialization of fuel cell technology for Class 8 vehicle applications in the second half of this decade. Volvo Group appreciates the efforts to develop a refueling infrastructure to support the future deployment of fuel cell Class 8 vehicles and sees this as an important investment. Fuel cell Class 8 vehicles will need demonstration projects to further prove their role in the commercial vehicle world.

Within the Volvo LIGHTS project in California, we have successfully demonstrated the viability of electric Class 8 trucks in real-world applications, putting 30 battery-electric Class 8 trucks in commercial operations across 11 different fleets.

The Volvo Group is the first traditional truck manufacturer to sell electric Class 8 trucks to customers and is the current market leader with more than 48 percent of the electric Class 8 truck market. Based on this experience, and our ongoing zero-emission product development efforts, our biggest concerns about the Class 8 truck market are not related to technology viability, but rather factors beyond our control that are critical to ensure a conducive market environment.

Last year, the Volvo Group released a guidebook outlining many key lessons learned from the Volvo LIGHTS project, many of which are similar to those encountered by other vehicle manufacturers and stakeholders in similar projects. They include:

- Critical charging infrastructure deployment takes far more time than anticipated and therefore engagement with local utilities and permitting agencies should be done early.
- Issues such as property ownership can complicate, delay or even prevent infrastructure deployment.
- Early stakeholder engagement and coordination are essential for infrastructure deployment. Local government planning and electric utilities can be allies or obstacles in the project implementation process.
- The entire charging ecosystem needs to be considered. A fleet's business goals must align with the vehicles' capabilities. That may dictate the type and

cost of charging infrastructure. Options such as on-site energy generation and storage may need to be factored into project planning.

- Fleet operators may not know what charging infrastructure they need until after they conduct a thorough duty-cycle analysis. It is critical this is done well prior to placing a truck order to help manage misalignment between vehicle deliveries and infrastructure readiness.
- Workforce development is needed. Drivers, technicians, fleet staff, first responders, charging providers and utility companies need training to maximize electric vehicle efficiency and uptime.
- Companies will need to build relationships with a diverse set of stakeholders to minimize operational disruptions from the introduction of new, advanced technology vehicles.
- Higher vehicle purchase prices, plus new infrastructure costs, can be a cost impediment to a business. While these costs may be partially offset by government-sponsored programs, navigating those programs is another new, added complexity and cost for the business.

Volvo Group also has applied some of these lessons internally, which helped spur the development of a new division, Volvo Energy, to provide customers with infrastructure solutions for ZEVs.